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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/393,956	02/24/95	SOLANKI	D 6010-706

E1M1/0226
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DECKER EXAMINER	
ART UNIT	PAPER NUMBER
2109	

DATE MAILED:

02/26/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

08/393,956

Applicant(s)

Solanki et al.

Examiner

Robert J. Decker, Esq.

Group Art Unit

2109



☒ Responsive to communication(s) filed on Feb 24, 1995

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-22 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-22 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

RJD

2/13/96

Part III DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informality:

- a. p. 3, line 26, "measured" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 8, 9, 11, 13, 16, and 19-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention due to the failure to provide the proper antecedent basis. The suggested corrections are listed below.

- a. claim 8, line 1, replace "a lead" with --one of said multiple leads--;
- b. claim 9, line 1, after "lead" insert --formed from one of said multiple leads--;
- c. claim 11, line 2, replace "a lead" with --one of said multiple leads--;
- d. claim 13, line 1, replace "a lead" with --one of said multiple leads--;
- e. claim 16, line 2, replace "a lead" with --one of said multiple leads--;
- f. claim 16, line 2, replace "a chamber wall" with --one of said chamber walls--;
- g. claim 19, line 3, after "other" insert --of the--; and
- h. claim 19, line 11, after "bonding" insert --said--.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

4. Claims 4, 5, 7, 10, and 11 are rejected under 35 U.S.C. § 103 as being unpatentable over Maslakow('011) in view of Fehr et al. Maslakow('011) discloses the invention essentially as claimed including a housing - SC chip carrier cavity package which comprises: walls - substrate cavity package 312 made of thermoplastic; an opening - cavity 315 to allow for encapsulation to cover the transducer - SC chip die 307; a cap - molded lid 322 which fits over the opening; a base - chip mounting pad 302 for which the pressure transducer is mounted on; a shelf region - substantial vertical walls 318 of which multiple leads - metallic lead frame 301 and conductive lead trace 331 extend through; the chip die 307 being electrically connected to the metallic lead frame via the conductive lead trace, bond wires 309 and lead frame 301 (Fig. 1). Maslakow('011) does not disclose the base being made of metal.

Fehr et al. disclose the housing having a metal base 42 (Fig. 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the Fehr et al. metallic base for the Maslakow('011) chip mounting pad for the purpose of electrically connecting the base with the lead and transducer.

Claims 6, 12, 14, 15, 16, 17, and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over Maslakow('011) and Fehr et al. as applied to claim 4 above, and further in view of Joiner, Jr. The teachings of modified Maslakow('011) are discussed above and it does not disclose a cap having a vent hole. Joiner, Jr. discloses a housing with a vent - opening 23 in the cap. It would have been obvious to one of ordinary skill in the art at the time of the invention to have installed the Joiner, Jr. vent in the modified Maslakow('011) housing since the vent is effective for dissipating heat and vapor from the transducer(Fig 3 and col. 4, lines 3-8).

Claims 16 and 17 further disclose the cavity filled with a pressure transfer medium, silicone gel. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a silicone gel material in the modified Maslakow('011) housing since examiner takes official notice that this material is well known in the art for encapsulating.

Claim 13 is rejected under 35 U.S.C. § 103 as being unpatentable over Maslakow('011), Fehr et al., and Joiner, Jr. as applied to claim 12 above, and further in view of Sing Deo et al. The teachings of modified Maslakow('011) are discussed above and it does not disclose a downset lead formed from an incoming lead. Sing Deo et al. disclose a downset lead 14 formed from an incoming lead and extending to the base - first plane 22a. It would have been obvious to one of ordinary skill in the art at

the time of the invention to have installed the Sing Deo et al. downset lead to connect with the base of the modified Maslakow('011) so as to make the electrical connection.

Claims 8, 9, and 19-22 are rejected under 35 U.S.C. § 103 as being unpatentable over Maslakow('011) and Fehr et al. as applied to claim 4 above, and further in view of Sing Deo et al. The teachings of modified Maslakow('011) are discussed above and it does not disclose a downset lead formed from an incoming lead. Sing Deo et al. disclose a downset lead 14 formed from an incoming lead and extending to the base - first plane 22a. It would have been obvious to one of ordinary skill in the art at the time of the invention to have installed the Sing Deo et al. downset lead to connect with the base of the modified Maslakow('011) so as to make the electrical connection.

The claimed methods, claim 19 and 20, would have been obvious to one of ordinary skill in the art at the time of the invention in view of modified Maslakow('011) because installing the pressure transducer through the opening and then securing the transducer to the base followed by the wire installation and encapsulation and finally covering with encapsulation and a cap are well known techniques in the art. To produce the device of modified Maslakow('011), an artisan would know one must follow one of numerous obvious methods, eg., installing the pressure transducer prior to the securing, encapsulating, and capping.

Cited Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rostoker discloses a silicone gel encapsulating the circuit die. Park et al. and Herbert disclose SC packages with downset leads. Maslakow('740 and '806), West, and Nagy et al. disclose SC devices made with plastic housings.

USPTO Communication

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Decker whose telephone number is (703) 308-7614. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (703) 308-0640. The fax phone number for this Group is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1782.

Kristine L. Kincaid
KRISTINE L. KINCAID
SUPERVISORY PATENT EXAMINER
GROUP 2100

February 16, 1996
Robert J. Decker, Esq.